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Fact Sheet for Congressional Requesters

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June 1990

DEFENSE ADP PROCUREMENT

Contracting and Market Share Information

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United States
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Washington, D.C. 20548

Information Management and
Technology Division

B-239180

June 8, 1990

The Honorable John Conyers, Jr.
Chairman, Committee on Government
Operations
House of Representatives

The Honorable Frank Horton
Ranking Minority Member, Committee
on Government Operations
House of Representatives

This report responds to your February 1989 requests for a comprehensive review of federal agencies' compatible computer procurements.[1] In your initial requests and in subsequent discussions with your offices, we were asked to answer several specific questions about agencies' procurements of mainframe computers and mainframe peripheral equipment. Your questions focused on identifying the extent to which agencies' procurements of mainframe computers and mainframe peripherals required compatibility with International Business Machines (IBM) or any other computer manufacturer. You were also interested in knowing details such as the identification of manufacturers whose equipment was acquired by each agency and the procurement methods used to obtain equipment.

This report includes statistics from agencies within the Department of Defense[2] but does not include information on the armed services. We previously reported similar statistics on the Navy (including the Marine Corps), the Army, the Air Force, and the National Aeronautics and Space Administration.[3] Information on the remaining agencies we

[1] A compatible procurement requires hardware or software that functions like specified or existing hardware or software, with little or no modification. Competition in such procurements may occur between manufacturers and marketers—such as system developers and system integrators—to supply equipment that meets the compatible requirements. Since there is the potential for competition between manufacturers and marketers, a compatible procurement does not necessarily result in the award of a sole source contract.

[2] Defense agencies included in this report are the Defense Communications Agency, Defense Contract Audit Agency, Defense Investigative Service, Defense Logistics Agency, Defense Mapping Agency, Defense Nuclear Agency, Strategic Defense Initiative Organization, Defense Medical Support Activity, Defense Technology Security Administration, and Washington Headquarters Services.

[3] Navy ADP Procurement: Contracting and Market Share Information (GAO/IMTEC-89-66FS, Sept. 15, 1989); Army ADP Procurement: Contracting and Market Share Information (GAO/IMTEC-90-28FS, Mar. 1, 1990); Air Force ADP Procurement: Contracting and Market Share Information (GAO/IMTEC-90-35FS, Apr. 9, 1990); and NASA ADP Procurement: Contracting and Market Share Information (GAO/IMTEC-90-39FS, Apr. 20, 1990).

included in our work will be reported after we have fully analyzed procurement data we collected from them.

The information we obtained from the Department of Defense shows that during the 3 1/2 fiscal years ending in March 1989, defense agencies had a total of 155 procurements for mainframes and mainframe peripherals and that 85 percent of these (132) required some type of compatibility. The defense agencies required IBM compatibility 48 percent of the time (64 of their 132 compatible procurements). Of the 68 remaining compatible procurements, the defense agencies required that 58 have Unisys compatibility, while nine required Honeywell Bull compatibility and one required Control Data Corporation compatibility.[4] When the defense agencies' procurements required IBM compatibility, IBM equipment was supplied 56 percent of the time (36 of the 64 IBM-compatible procurements).

Defense agencies obligated $82.1 million for the 155 mainframe and mainframe peripheral procurements. When we used dollars for comparison—as opposed to the number of procurements—we found that overall the defense agencies obligated more dollars for IBM equipment than for any other manufacturer's equipment ($22.2 million for IBM versus $59.9 million for all others), including both compatible and other procurements where no compatibility was required. For the 132 compatible procurements, with total obligations of $51.6 million, we found that the defense agencies obligated $24.3 million to IBM-compatible procurements. For the IBM-compatible procurements the defense agencies obligated the most dollars to Storage Technology Corporation, Amdahl, and IBM respectively.

As requested in discussions with your offices, we also obtained information from the defense agencies on the procurement methods they used, including their use of contractors that participate in the Small Business Administration's program for small disadvantaged businesses—known as 8(a) contractors. Additionally, we collected information on the defense agencies' procurements performed under the Warner Amendment (10 U.S.C. 2315), which exempts the Department of Defense from General Services Administration (GSA) oversight when procuring certain

[4]Since several companies manufacture and market IBM-compatible equipment, competition in IBM-compatible procurements may occur among a variety of manufacturers and marketers. However, there are few if any companies that manufacture equipment compatible with Unisys, Honeywell Bull, or Control Data Corporation. As a result, competition in procurements requiring Control Data Corporation, Honeywell Bull, or Unisys compatibility generally occurs only between the manufacturer of the required equipment and companies marketing that manufacturer's equipment.

military-related automated data processing (ADP) resources. The detailed questions you asked and our answers are summarized in appendix I. Appendix II contains tables with aggregate statistics on detailed aspects of the defense agencies' procurements. The tables in appendix II are the basis for our answers to your questions. Also, because of your particular interest in the Defense Logistics Agency (DLA), we have included separate tables in appendix III of detailed statistics on DLA's procurements.

We are reporting information for the 3 1/2 fiscal years from October 1, 1985, through March 31, 1989. All the information is based on the Department of Defense's response to a questionnaire we devised and distributed to 35 federal government agencies. We did not include any information on the Defense Intelligence Agency because the data reported in response to our questionnaire was classified. We did not independently validate the information, which Defense supplied in June 1989, nor did we evaluate any documentation related to individual defense agencies' procurements. However, we checked the defense agencies' information for consistency with the instructions for our questionnaire and made appropriate revisions. At your request, we did not solicit or obtain comments from the defense agencies on this report. Appendix IV contains additional details on the objective, scope, and methodology of our work.

As arranged with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. We will then send copies to the Secretary of Defense, and will also make copies available to others upon request.

This information was compiled under the direction of Jack L. Brock, Jr., Director, Government Information and Financial Management, who can be contacted at (202) 275-3195, should you require additional information. Other major contributors to this report are listed in appendix V.

Ralph V. Carlone
Assistant Comptroller General

Contents

Letter 1

Appendix I Questions and Answers About Defense Agencies' Procurements 8

Appendix II Detailed Statistics on Defense Agencies' Procurements 21

Appendix III Detailed Statistics on DLA Procurements 24

Appendix IV Objective, Scope, and Methodology 27

Appendix V Major Contributors to This Report 30

Tables

Table II.1: Defense Agencies' Mainframe and Mainframe Peripheral Procurements 21
Table II.2: Defense Agencies' Compatible Procurements According to Type of Compatibility 21
Table II.3: Defense Agencies' IBM-Compatible Procurements According to Manufacturer of Equipment 21
Table II.4: Defense Agencies' Compatible Procurements According to Procurement Method 22

Table II.5: Defense Agencies' IBM-Compatible Procurements According to Procurement Method 22
Table II.6: Defense Agencies' Mainframe and Mainframe Peripheral Procurements According to Manufacturer of Equipment 23
Table II.7: Defense Agencies' Mainframe and Mainframe Peripheral Procurements Under the Warner Amendment 23
Table III.1: DLA Mainframe and Mainframe Peripheral Procurements 24
Table III.2: DLA Compatible Procurements According to Type of Compatibility 24
Table III.3: DLA IBM-Compatible Procurements According to Manufacturer of Equipment 24
Table III.4: DLA Compatible Procurements According to Procurement Method 25
Table III.5: DLA IBM-Compatible Procurements According to Procurement Method 25
Table III.6: DLA Mainframe and Mainframe Peripheral Procurements According to Manufacturer of Equipment 26

Figures

Figure I.1: Number of the Defense Agencies' Mainframe and Mainframe Peripheral Procurements 9
Figure I.2: Dollars for the Defense Agencies' Mainframe and Mainframe Peripheral Procurements 9
Figure I.3: Number of the Defense Agencies' Compatible Procurements According to Type of Compatibility 11
Figure I.4: Dollars for the Defense Agencies' Compatible Procurements According to Type of Compatibility 11
Figure I.5: Number of the Defense Agencies' IBM-Compatible Procurements According to Manufacturer of Equipment 13
Figure I.6: Dollars for the Defense Agencies' IBM-Compatible Procurements According to Manufacturer of Equipment 13
Figure I.7: Number of the Defense Agencies' Compatible Procurements According to Procurement Method 15
Figure I.8: Dollars for the Defense Agencies' Compatible Procurements According to Procurement Method 15

Figure I.9: Number of the Defense Agencies' IBM-Compatible Procurements According to Procurement Method 17
Figure I.10: Dollars for the Defense Agencies' IBM-Compatible Procurements According to Procurement Method 17
Figure I.11: Number of the Defense Agencies' Mainframe and Mainframe Peripheral Procurements According to Manufacturer of Equipment 19
Figure I.12: Dollars for the Defense Agencies' Mainframe and Mainframe Peripheral Procurements According to Manufacturer of Equipment 19

Abbreviations

ADP	automated data processing
DLA	Defense Logistics Agency
GAO	General Accounting Office
GSA	General Services Administration
IBM	International Business Machines
IMTEC	Information Management and Technology Division

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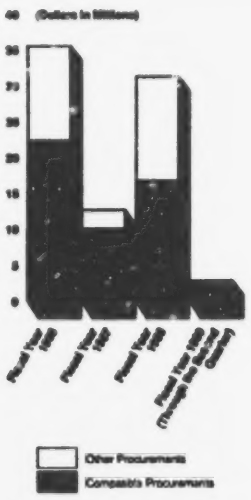
Questions and Answers About Defense Agencies' Procurements

What are the numbers and dollar amounts of the defense agencies' mainframe and mainframe peripheral procurements requiring compatibility and is there any trend toward the increased use of compatible procurements?

The defense agencies had a total of 155 procurements and obligated a total of $82.1 million for mainframe computers and mainframe peripherals during the 3 1/2 fiscal years ending in March 1989. The defense agencies' statistics showed that compatible procurements comprised 132 of their 155 total procurements, representing $51.6 million of the $82.1 million obligated. In each year of the 3 1/2 fiscal years ending in March 1989—using the defense agencies' number of procurements as a measure—the percentage of compatible procurements versus other procurements was 82 percent or higher. For the same time period, the percentage of dollars obligated to compatible procurements versus other procurements was 54 percent or higher in each year. These statistics, as depicted in figures I.1 and I.2, show that there was no trend toward increased compatible procurements.

Figure I.1: Number of the Defense Agencies' Mainframe and Mainframe Peripheral Procurements

Figure I.2: Dollars for the Defense Agencies' Mainframe and Mainframe Peripheral Procurements



What is the distribution of the defense agencies' compatible mainframe and mainframe peripheral procurements according to type of compatibility?

Those procurements that the defense agencies identified as having a compatible requirement were for either Control Data Corporation, Honeywell Bull, IBM, or Unisys compatibility. Specifically, 64 of the 132 procurements were to satisfy IBM-compatible requirements representing $24.3 million of $51.6 million obligated for all compatible procurements. Further, Unisys-compatible requirements represented 58 of the 132 procurements and $19.6 million of the obligations. Procurements to meet Honeywell Bull-compatible requirements accounted for nine of the compatible procurements and $7.7 million of the obligations, while one Control Data Corporation-compatible procurement represented $40,000 of the obligations for compatible mainframe and mainframe peripheral procurements by the defense agencies.

Figure I.3: Number of the Defense Agencies' Compatible Procurements According to Type of Compatibility

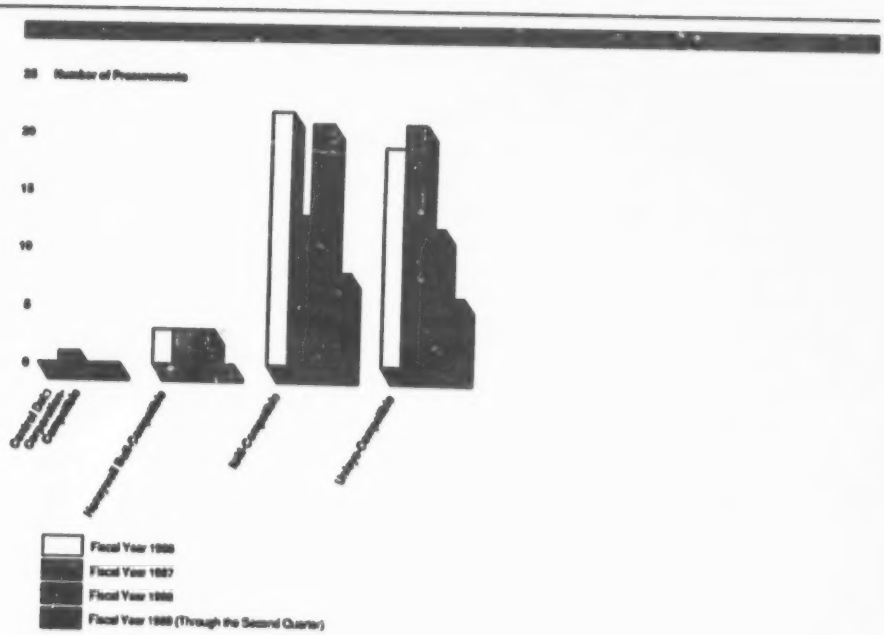
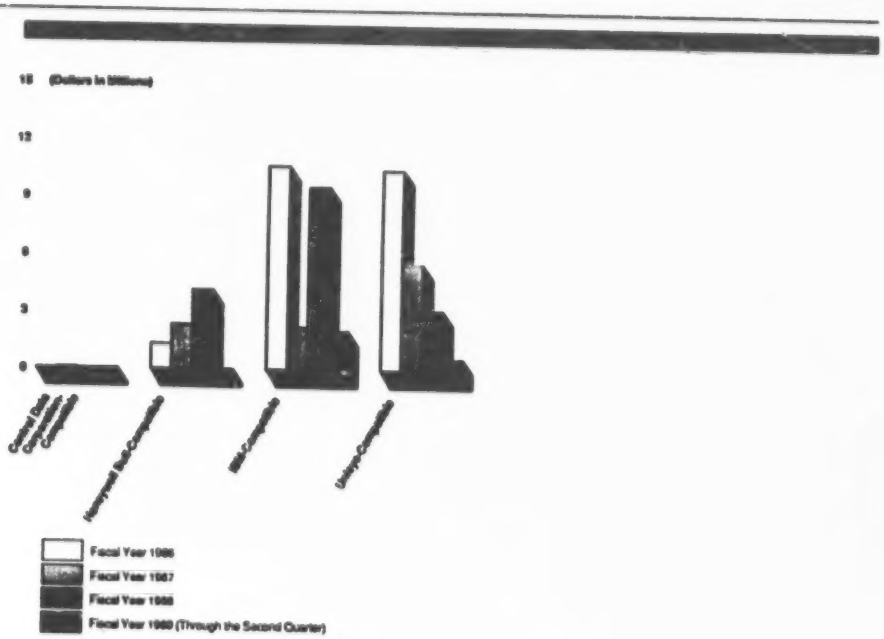


Figure I.4: Dollars for the Defense Agencies' Compatible Procurements According to Type of Compatibility



What equipment manufacturers are involved in the defense agencies' IBM-compatible mainframe and mainframe peripheral procurements?

Regarding the IBM-compatible procurements in each of fiscal years 1986 through 1989 (through the second quarter), the defense agencies obtained IBM equipment in most of these procurements and obligated the most money for Storage Technology Corporation equipment. Of the 64 IBM-compatible procurements, 36 resulted in the defense agencies obtaining IBM equipment which represented $4.8 million in obligated dollars. Of the total $24.3 million obligated to IBM-compatible procurements, $9.8 million was for procurements involving Storage Technology Corporation equipment and $6.8 million involved Amdahl. Memorex, National Advanced Systems, and others were among those manufacturers involved in the remainder of the defense agencies' IBM-compatible procurements.

Figure I.5: Number of the Defense Agencies' IBM-Compatible Procurements According to Manufacturer of Equipment

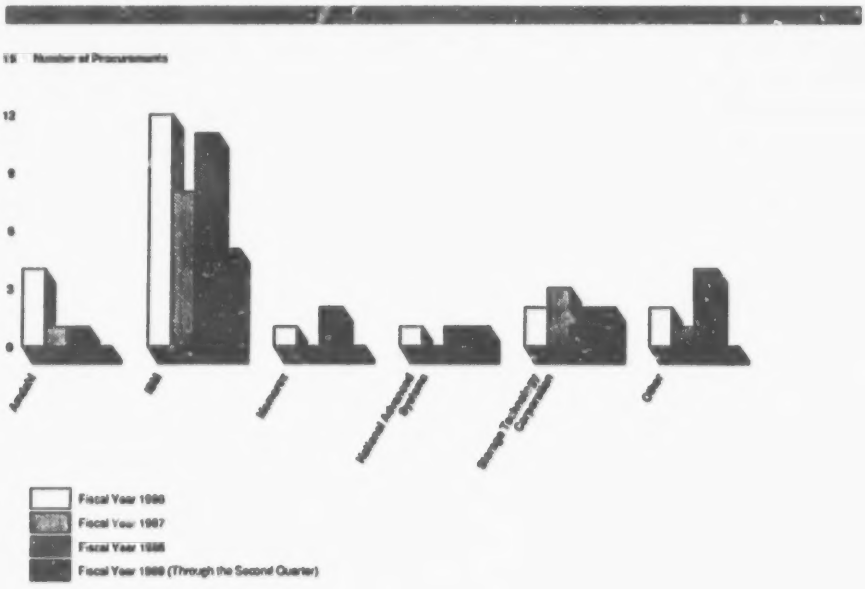
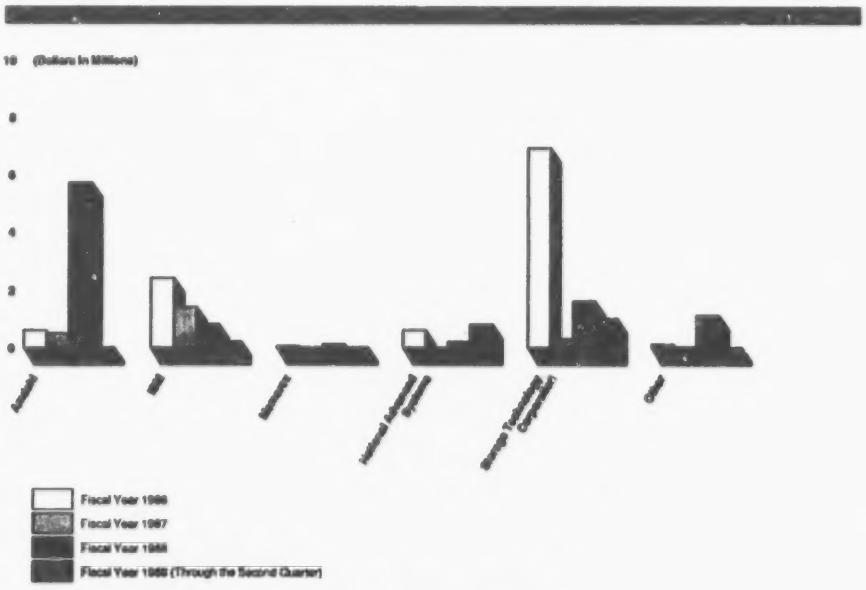


Figure I.6: Dollars for the Defense Agencies' IBM-Compatible Procurements According to Manufacturer of Equipment



What procurement methods were used to obtain all types of compatible mainframe computers and mainframe peripheral equipment? And, did the defense agencies frequently use new contracts with 8(a) contractors to obtain compatible mainframes and mainframe peripherals?

Using either the number of procurements or dollar obligations as a measure, the defense agencies most frequently used modifications to existing contracts as the procurement method to obtain equipment when compatible requirements were identified. These contract modifications accounted for 47 of the 132 compatible procurements and $14.9 million of $51.6 million obligated. New contracts with 8(a) firms were not used by the defense agencies in any of the 132 compatible procurements.

Figure I.7: Number of the Defense Agencies' Compatible Procurements According to Procurement Method

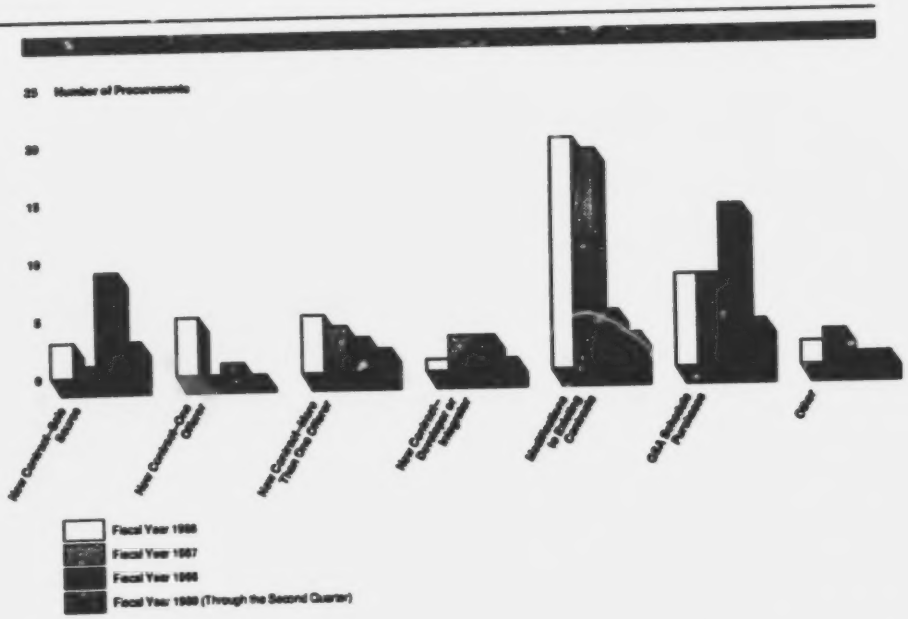
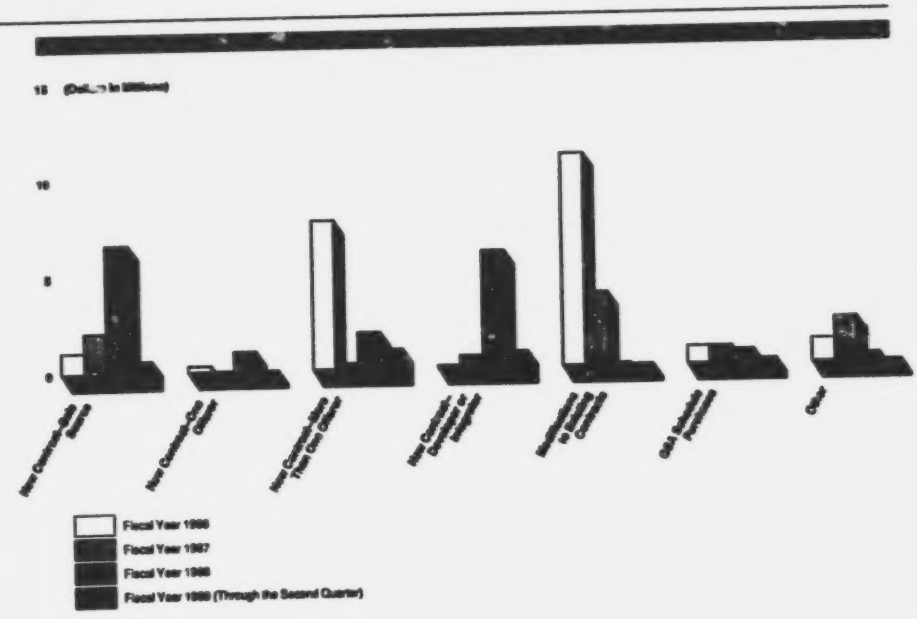


Figure I.8: Dollars for the Defense Agencies' Compatible Procurements According to Procurement Method



What procurement methods were used to obtain IBM-compatible mainframe computers and mainframe peripheral equipment? And, did the defense agencies frequently use new contracts with 8(a) contractors to obtain IBM-compatible mainframes and mainframe peripherals?

The defense agencies most frequently used GSA schedule purchases as the procurement method for obtaining IBM-compatible equipment (28 of 64 procurements). However, new contracts with more than one offeror participating in the selection process accounted for more dollar obligations ($10.4 million of $24.3 million obligated) than any other procurement method. New contracts with 8(a) firms were not used by the defense agencies for any of the 64 IBM-compatible procurements during the 3 1/2 year period.

Figure I.9: Number of the Defense Agencies' IBM-Compatible Procurements According to Procurement Method

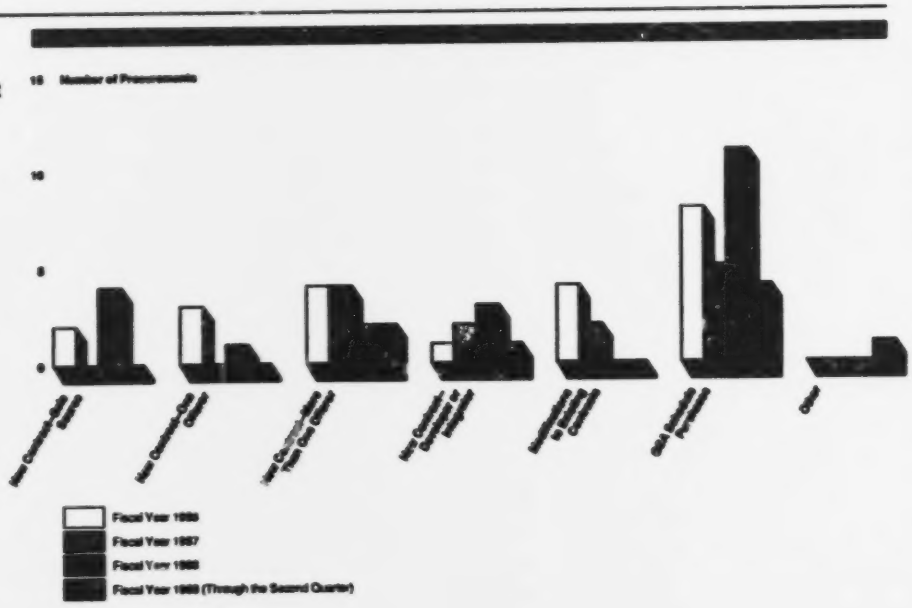
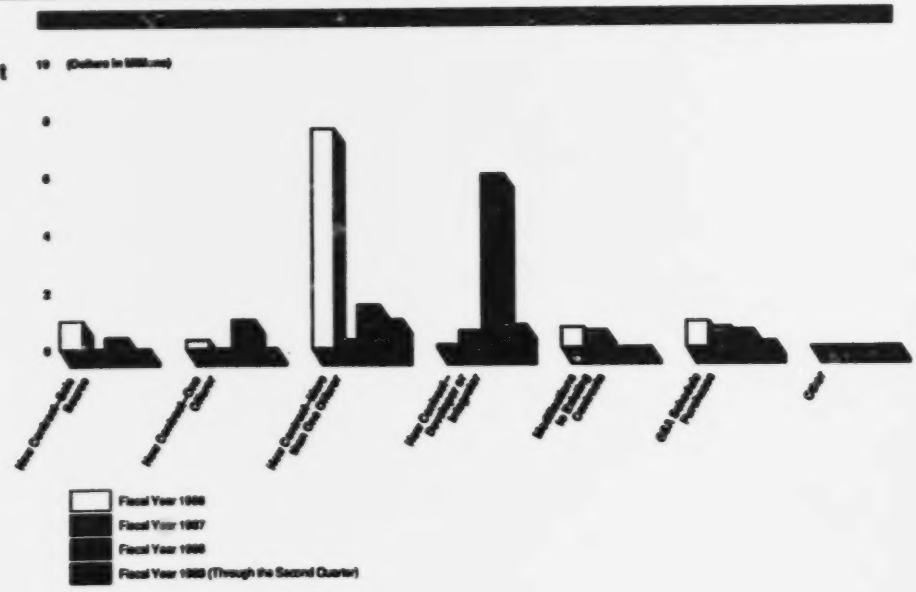


Figure I.10: Dollars for the Defense Agencies' IBM-Compatible Procurements According to Procurement Method



What equipment manufacturers were involved in the defense agencies' mainframe and mainframe peripheral procurements, including both procurements where compatibility was required and procurements with no compatibility requirement?

Using the number of procurements as a measure, Unisys equipment was most frequently supplied to the defense agencies for mainframe and mainframe peripheral procurements in each of fiscal years 1986 through 1988 and for the first half of fiscal year 1989 with 59 out of 155 total procurements. IBM was the manufacturer whose equipment was second most frequently supplied to the defense agencies with 41 out of 155 total procurements. However, using obligated dollars as the measure during the same 3 1/2 fiscal year period, the defense agencies' procurements involved more IBM equipment than any other manufacturers' equipment, with $22.2 million of the $82.1 million in total obligations. Unisys was the second greatest with $19.5 in total obligations. Amdahl, Control Data Corporation, Honeywell Bull, Memorex, National Advanced Systems, NCR Comten, Storage Technology Corporation, and others were also involved in supplying equipment to the defense agencies.

Figure I.11: Number of the Defense Agencies' Mainframe and Mainframe Peripheral Procurements According to Manufacturer of Equipment

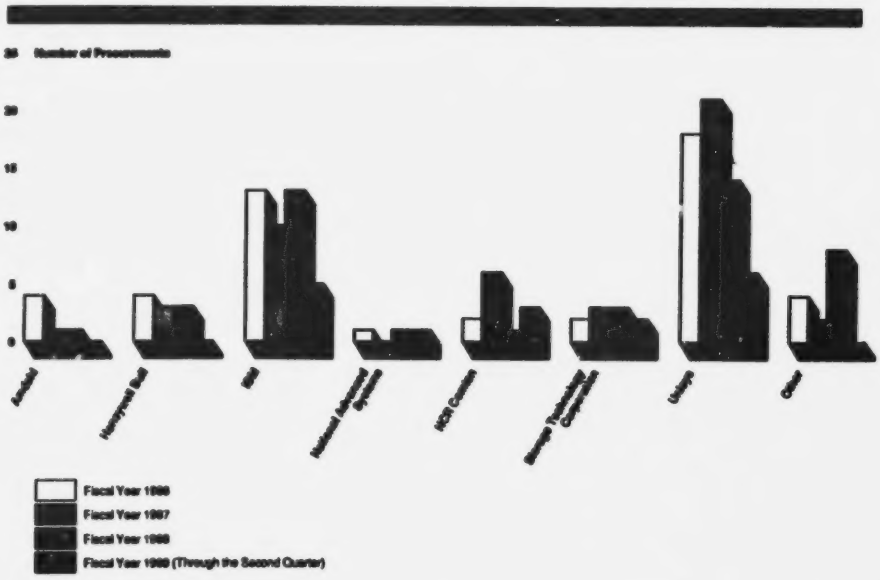
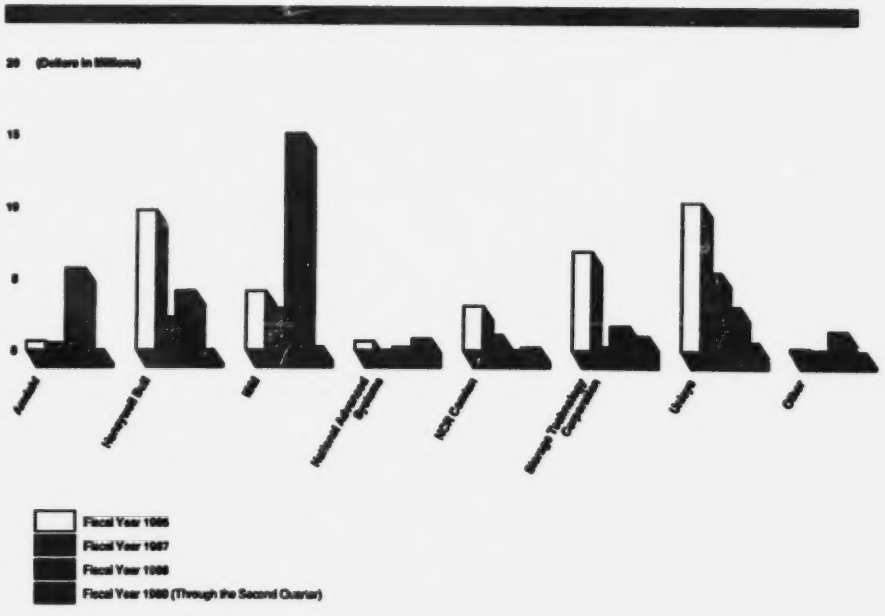


Figure I.12: Dollars for the Defense Agencies' Mainframe and Mainframe Peripheral Procurements According to Manufacturer of Equipment



To what extent have the defense agencies procured mainframe computers and mainframe peripheral equipment under the Warner Amendment?

The defense agencies' statistics showed that they conducted 42 procurements for mainframe computers and mainframe peripherals, representing $40.3 million in obligations, under the Warner Amendment. Of those 42 procurements, 41 were compatible procurements. Those 41 procurements represented $26.3 million in obligations.

Detailed Statistics on Defense Agencies' Procurements

Table II.1: Defense Agencies' Mainframe and Mainframe Peripheral Procurements

Dollars in millions

	Fiscal Year 1986		Fiscal Year 1987		Fiscal Year 1988		Fiscal Year 1989[a]		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Compatible	44	$22.3	38	$10.0	36	$16.7	14	$2.6	132	$51.6
Other	4	13.2	8	2.6	8	14.5	3	0.2	23	30.5
Total	**48**	**$35.5**	**46**	**$12.6**	**44**	**$31.2**	**17**	**$2.8**	**155**	**$82.1**
Compatible Percent of Total	92%	63%	83%	79%	82%	54%	82%	93%	85%	63%

[a]Fiscal year 1989 through the second quarter.

Table II.2: Defense Agencies' Compatible Procurements According to Type of Compatibility

Dollars in millions

	Fiscal Year 1986		Fiscal Year 1987		Fiscal Year 1988		Fiscal Year 1989[a]		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Control Data Corporation-Compatible	0	$0.0	1	[b]	0	$0.0	0	$0.0	1	[b]
Honeywell Bull-Compatible	3	1.3	3	$2.3	3	4.1	0	0.0	9	$7.7
IBM-Compatible	22	10.6	13	2.2	21	9.5	8	2.0	64	24.3
Unisys-Compatible	19	10.4	21	5.5	12	3.1	6	0.6	58	19.6
Total	**44**	**$22.3**	**38**	**$10.0**	**36**	**$16.7**	**14**	**$2.6**	**132**	**$51.6**

[a]Fiscal year 1989 through the second quarter.

[b]Less than $50,000.

Table II.3: Defense Agencies' IBM-Compatible Procurements According to Manufacturer of Equipment

Dollars in Millions

	Fiscal Year 1986		Fiscal Year 1987		Fiscal Year 1988		Fiscal Year 1989[a]		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Amdahl	4	$0.6	1	$0.5	1	$5.7	0	$0.0	6	$6.8
IBM	12	2.4	8	1.4	11	0.8	5	0.2	36	4.8
Memorex	1	[b]	0	0.0	2	0.1	0	0.0	3	0.1
National Advanced Systems	1	0.6	0	0.0	1	0.2	1	0.8	3	1.6
Storage Technology Corporation	2	6.9	3	0.3	2	1.6	2	1.0	9	9.8
Other	2	0.1	1	[b]	4	1.1	0	0.0	7	1.2
Total	**22**	**$10.6**	**13**	**$2.2**	**21**	**$9.5**	**8**	**$2.0**	**64**	**$24.3**

[a]Fiscal year 1989 through the second quarter.

[b]Less than $50,000.

Table II.4: Defense Agencies' Compatible Procurements According to Procurement Method

Dollars in millions

	Fiscal Year 1986		Fiscal Year 1987		Fiscal Year 1988		Fiscal Year 1989[a]		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
New Contract—Sole Source	3	$1.1	1	$2.1	9	$6.6	3	$0.6	16	$10.4
New Contract—One Offeror	5	0.3	0	0.0	1	1.0	0	0.0	6	1.3
New Contract—More Than One Offeror	5	7.7	4	0.3	3	1.9	2	1.0	14	10.9
New Contract—Developer or Integrator	1	0.1	3	0.6	3	6.0	1	0.8	8	7.5
Modifications to Existing Contracts	20	11.0	19	3.8	5	0.1	3	[b]	47	14.9
GSA Schedule Purchases	8	0.9	8	0.9	14	0.7	4	0.2	34	2.7
Other	2	1.2	3	2.3	1	0.4	1	[b]	7	3.9
Total	**44**	**$22.3**	**38**	**$10.0**	**36**	**$16.7**	**14**	**$2.6**	**132**	**$51.6**

[a]Fiscal year 1989 through the second quarter.

[b]Less than $50,000.

Table II.5: Defense Agencies' IBM-Compatible Procurements According to Procurement Method

Dollars in millions

	Fiscal Year 1986		Fiscal Year 1987		Fiscal Year 1988		Fiscal Year 1989[a]		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
New Contract—Sole Source	2	$1.0	0	$0.0	4	$0.4	0	$0.0	6	$1.4
New Contract—One Offeror	3	0.3	0	0.0	1	1.0	0	0.0	4	1.3
New Contract—More Than One Offeror	4	7.6	4	0.3	2	1.5	2	1.0	12	10.4
New Contract—Developer or Integrator	1	0.1	2	0.6	3	6.0	1	0.8	7	7.5
Modifications to Existing Contracts	4	0.7	2	0.6	0	0.0	0	0.0	6	1.3
GSA Schedule Purchases	8	0.9	5	0.7	11	0.6	4	0.2	28	2.4
Other	0	0.0	0	0.0	0	0.0	1	[b]	1	[b]
Total	**22**	**$10.6**	**13**	**$2.2**	**21**	**$9.5**	**8**	**$2.0**	**64**	**$24.3**

[a]Fiscal year 1989 through the second quarter.

[b]Less than $50,000.

Table II.6: Defense Agencies' Mainframe and Mainframe Peripheral Procurements According to Manufacturer of Equipment

Dollars in millions

	Fiscal Year 1986		Fiscal Year 1987		Fiscal Year 1988		Fiscal Year 1989[a]		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Amdahl	4	$0.6	1	$0.5	1	$5.7	0	$0.0	6	$6.8
Control Data Corporation[c]	0	0.0	1	[b]	0	0.0	0	0.0	1	[b]
Honeywell Bull	4	9.7	3	2.3	3	4.1	0	0.0	10	16.1
IBM	13	4.1	10	2.9	13	15.0	5	0.2	41	22.2
Memorex[c]	1	[b]	0	0.0	2	0.1	0	0.0	3	0.1
National Advanced Systems	1	0.6	0	0.0	1	0.2	1	0.8	3	1.6
NCR Comten	2	3.1	6	1.1	1	[b]	3	0.2	12	4.4
Storage Technology Corporation	2	6.9	3	0.3	3	1.7	2	1.0	10	9.9
Unisys	18	10.3	21	5.5	14	3.1	6	0.6	59	19.5
Other	3	0.2	1	[b]	6	1.3	0	0.0	10	1.5
Total	**48**	**$35.5**	**46**	**$12.6**	**44**	**$31.2**	**17**	**$2.8**	**155**	**$82.1**

[a]Fiscal year 1989 through the second quarter.

[b]Less than $50,000.

[c]Included in Other on Figure I.11 and Figure I.12.

Table II.7: Defense Agencies' Mainframe and Mainframe Peripheral Procurements Under the Warner Amendment

Dollars in millions

	Fiscal Year 1986		Fiscal Year 1987		Fiscal Year 1988		Fiscal Year 1989[a]		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Compatible	12	$12.1	18	$7.3	9	$6.6	2	$0.3	41	$26.3
Other	0	0.0	0	0.0	1	14.0	0	0.0	1	14.0
Total	**12**	**$12.1**	**18**	**$7.3**	**10**	**$20.6**	**2**	**$0.3**	**42**	**$40.3**

[a]Fiscal year 1989 through the second quarter.

Detailed Statistics on DLA Procurements

Table III.1: DLA Mainframe and Mainframe Peripheral Procurements

Dollars in millions

	Fiscal Year 1986		Fiscal Year 1987		Fiscal Year 1988		Fiscal Year 1989[a]		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Compatible	5	$6.7	4	$0.7	10	$9.4	4	$2.1	23	$18.9
Other	4	13.2	6	1.1	6	0.3	3	0.2	19	14.8
Total	**9**	**$19.9**	**10**	**$1.8**	**16**	**$9.7**	**7**	**$2.3**	**42**	**$33.7**
Compatible Percent of Total	56%	34%	40%	39%	63%	97%	57%	91%	55%	56%

[a]Fiscal year 1989 through the second quarter.

Table III.2: DLA Compatible Procurements According to Type of Compatibility

Dollars in millions

	Fiscal Year 1986		Fiscal Year 1987		Fiscal Year 1988		Fiscal Year 1989[a]		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Control Data Corporation-Compatible	0	$0.0	1	[b]	0	$0.0	0	$0.0	1	[b]
Honeywell Bull-Compatible	0	0.0	0	$0.0	1	0.2	0	0.0	1	$0.2
IBM-Compatible	2	6.6	3	0.7	8	8.8	3	1.8	16	17.9
Unisys-Compatible	3	0.1	0	0.0	1	0.4	1	0.3	5	0.8
Total	**5**	**$6.7**	**4**	**$0.7**	**10**	**$9.4**	**4**	**$2.1**	**23**	**$18.9**

[a]Fiscal year 1989 through the second quarter.

[b]Less than $50,000.

Table III.3: DLA IBM-Compatible Procurements According to Manufacturer of Equipment

Dollars in millions

	Fiscal Year 1986		Fiscal Year 1987		Fiscal Year 1988		Fiscal Year 1989[a]		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Amdahl	0	$0.0	0	$0.0	1	$5.7	0	$0.0	1	$5.7
IBM	1	0.1	3	0.7	3	0.4	0	0.0	7	1.2
National Advanced Systems	0	0.0	0	0.0	0	0.0	1	0.8	1	0.8
Storage Technology Corporation	1	6.5	0	0.0	2	1.6	2	1.0	5	9.1
Other	0	0.0	0	0.0	2	1.1	0	0.0	2	1.1
Total	**2**	**$6.6**	**3**	**$0.7**	**8**	**$8.8**	**3**	**$1.8**	**16**	**$17.9**

[a]Fiscal year 1989 through the second quarter.

Table III.4: DLA Compatible Procurements According to Procurement Method

Dollars in millions

	Fiscal Year 1986		Fiscal Year 1987		Fiscal Year 1988		Fiscal Year 1989[a]		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
New Contract—Sole Source	0	$0.0	0	$0.0	4	$0.5	1	$0.3	5	$0.8
New Contract—One Offeror	2	[b]	0	0.0	1	1.0	0	0.0	3	1.0
New Contract—More Than One Offeror	2	6.6	0	0.0	2	1.9	2	1.0	6	9.5
New Contract—Developer or Integrator	0	0.0	2	0.1	2	5.9	1	0.8	5	6.8
Modifications to Existing Contracts	1	0.1	2	0.6	0	0.0	0	0.0	3	0.7
GSA Schedule Purchases	0	0.0	0	0.0	1	0.1	0	0.0	1	0.1
Total	**5**	**$6.7**	**4**	**$0.7**	**10**	**$9.4**	**4**	**$2.1**	**23**	**$18.9**

[a]Fiscal year 1989 through the second quarter.

[b]Less than $50,000.

Table III.5: DLA IBM-Compatible Procurements According to Procurement Method

Dollars in millions

	Fiscal Year 1986		Fiscal Year 1987		Fiscal Year 1988		Fiscal Year 1989[a]		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
New Contract—Sole Source	0	$0.0	0	$0.0	3	$0.3	0	$0.0	3	$0.3
New Contract—One Offeror	0	0.0	0	0.0	1	1.0	0	0.0	1	1.0
New Contract—More Than One Offeror	1	6.5	0	0.0	1	1.5	2	1.0	4	9.0
New Contract—Developer or Integrator	0	0.0	1	0.1	2	5.9	1	0.8	4	6.8
Modifications to Existing Contracts	1	0.1	2	0.6	0	0.0	0	0.0	3	0.7
GSA Schedule Purchases	0	0.0	0	0.0	1	0.1	0	0.0	1	0.1
Total	**2**	**$6.6**	**3**	**$0.7**	**8**	**$8.8**	**3**	**$1.8**	**16**	**$17.9**

[a]Fiscal year 1989 through the second quarter.

Table III.6: DLA Mainframe and Mainframe Peripheral Procurements According to Manufacturer of Equipment

Dollars in millions

	Fiscal Year 1986		Fiscal Year 1987		Fiscal Year 1988		Fiscal Year 1989[a]		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Amdahl	0	$0.0	0	$0.0	1	$5.7	0	$0.0	1	$5.7
Control Data Corporation	0	0.0	1	[b]	0	0.0	0	0.0	1	[b]
Honeywell Bull	1	8.4	0	0.0	1	0.2	0	0.0	2	8.6
IBM	2	1.8	3	0.7	3	0.4	0	0.0	8	2.9
National Advanced Systems	0	0.0	0	0.0	0	0.0	1	0.8	1	0.8
NCR Comten	2	3.1	6	1.1	1	[b]	3	0.2	12	4.4
Storage Technology Corporation	1	6.5	0	0.0	3	1.7	2	1.0	6	9.2
Unisys	2	[b]	0	0.0	3	0.4	1	0.3	6	0.7
Other	1	0.1	0	0.0	4	1.3	0	0.0	5	1.4
Total	**9**	**$19.9**	**10**	**$1.8**	**16**	**$9.7**	**7**	**$2.3**	**42**	**$33.7**

[a]Fiscal year 1989 through the second quarter.

[b]Less than $50,000.

Objective, Scope, and Methodology

In February 1989 we were requested by the Chairman and the Ranking Minority Member, House Committee on Government Operations, to perform a comprehensive review of the government's use of IBM-compatible ADP procurements. In response to the requests and in discussions with the Chairman's and Ranking Minority Member's offices, we agreed that procurements of mainframes and mainframe peripherals would be included in our review, with emphasis on compatible procurements. Our review covered procurements during the 3 1/2 fiscal years ending in March 1989, at 35 federal agencies.

Our primary objective was to obtain and analyze information on specific aspects of each agency's ADP-related procurements. This report focuses on the Department of Defense and includes the number and aggregate dollar value of the defense agencies' mainframe-related contracts, distribution of procurements among equipment manufacturers, and information on the use of the Warner Amendment in mainframe-related procurements. Defense agencies included in this report are the Defense Communications Agency, Defense Contract Audit Agency, Defense Investigative Service, DLA, Defense Mapping Agency, Defense Nuclear Agency, Strategic Defense Initiative Organization, Defense Medical Support Activity, Defense Technology Security Administration, and Washington Headquarters Services. Also, we included separate tables of detailed statistics on DLA's procurements in appendix III. Although Defense provided us with data on procurements by the Defense Intelligence Agency, we did not include any related information in this report because the data was classified.

Additionally, we are reporting on the various procurement methods the defense agencies used to obtain mainframe-related equipment. We used the following mutually exclusive procurement methods to group the defense agencies' procurements. The first three methods represent specific types of new contracts with mainframe and peripheral equipment manufacturers. These consist of sole source new contracts, new contracts that resulted from competitive procedures where only one offeror remained in the procurement at the time the awardee was selected, and new contracts that resulted from competitive procedures where the awardee was selected from among multiple competitors. We also included a category for new contracts with system developers and integrators—except any contracts separately categorized as awarded to 8(a) firms. We also obtained and analyzed data on the defense agencies' modifications to existing contracts, use of GSA's multiple award schedule contracts, and other miscellaneous procurement methods.

To accomplish our objective and facilitate the Department of Defense's information gathering, we designed a questionnaire which, when properly completed, provided us with the necessary information. Our questionnaire included several charts and provided detailed instructions, with definitions and examples, to help the defense agencies identify and report the relevant information. Our questionnaire instructions cited pertinent federal regulations to ensure consistency in understanding of the terms used and to identify key definitions.

In preparing instructions for our questionnaire, we recognized the need to clearly and consistently identify mainframe computers, as opposed to superminicomputers and supercomputers. Because technology changes, criteria such as storage capacity, processing speed, physical size, cooling requirements, and cost do not provide an adequate basis for clear and consistent identification of mainframes. Therefore, after consulting with computer vendors, GSA, other federal agency officials, and Datapro,[1] we considered vendor marketing strategy—in addition to computer architecture and performance—as the basis for classifying particular computers as superminicomputers, mainframes, or supercomputers. Like Datapro, we classified as mainframes some smaller and less expensive models if they belong to a product line, or family, of mainframes sharing a common architecture or operating system. However, models with similar performance characteristics that do not belong to a mainframe family and are manufactured by companies that are not traditionally recognized as mainframe manufacturers were not classified as mainframes. We provided a list of mainframe manufacturers and models in the instructions for our questionnaire as examples of computers that agencies should include in completing the questionnaire.

We obtained comments on preliminary copies of our questionnaire from information resources management officials at the Departments of Agriculture and Transportation, to aid in ensuring the questionnaire's clarity. After modifying the questionnaire based on comments received from officials at the Departments of Agriculture and Transportation, we asked the senior information resources management officials at the Department of Defense and other federal agencies to complete the questionnaire.

Our questionnaire was furnished to the Department of Defense in mid-April 1989. Upon receiving the defense agencies' response in June 1989,

[1]Datapro is a trade publication that provides detailed information on computers, peripheral equipment, and software.

the information was reviewed to determine if the instructions were followed correctly and if the information was clear and consistent. Although we did not independently validate the information supplied in the defense agencies' response, our questionnaire contained several internal checks to determine if inconsistencies were present. In some situations we modified the data on the basis of discussions with Department of Defense officials. In other cases we excluded inappropriate data. For example, we directed the defense agencies to include only procurement data for mainframe-related equipment. However, in a few instances the defense agencies included procurements for computers other than mainframes. In order to maintain consistency in the statistics across the 35 federal agencies, any procurements reported by the defense agencies for equipment other than mainframes and related peripherals were deleted from our analysis. Our work did not include solicitation or evaluation of documents related to the defense agencies' individual procurements. The figures and tables in appendixes I, II, and III were developed from our analysis.

We did not solicit or obtain comments from Department of Defense officials about this report, however, we discussed our scope and methodology with them in April 1990, at the Pentagon. Additionally, meetings were conducted with the Department of Agriculture, the Department of Transportation, and the General Services Administration in Washington, D.C. Our review was conducted from February 1989 through April 1990. Our work was performed in accordance with generally accepted government auditing standards.

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